## 40 CFR Ch. I (7-1-01 Edition)

## Pt. 60, App. A-4, Meth. 7C

 $13.3\,$  Range. The lower detectable limit is 13 mg  $NO_X/m^3,$  as  $NO_2$  (7 ppm  $NO_X)$  when sampling at 500 ml/min for 1 hour. No upper limit has been established; however, when using the recommended sampling conditions, the method has been found to collect  $NO_X$  emissions quantitatively up to 1782 mg  $NO_X/m^3,$  as  $NO_2$  (932 ppm  $NO_X).$ 

14.0 Pollution Prevention. [Reserved]

15.0 Waste Management. [Reserved]

16.0 References

1. Margeson, J.H., W.J. Mitchell, J.C. Suggs, and M.R. Midgett. Integrated Sampling and Analysis Methods for Determining NO<sub>X</sub> Emissions at Electric Utility Plants. Environmental Protection Agency, Research Triangle Park, NC. Journal of the Air

Pollution Control Association. 32:1210-1215.1982.

- 2. Memorandum and attachment from J.H. Margeson, Source Branch, Quality Assurance Division, Environmental Monitoring Systems Laboratory, to The Record, EPA. March 30, 1983.  $\rm NH_3$  Interference in Methods 7C and 7D.
- 3. Margeson, J.H., J.C. Suggs, and M.R. Midgett. Reduction of Nitrate to Nitrite with Cadmium. Anal. Chem. 52:1955–57. 1980.
- 4. Quality Assurance Handbook for Air Pollution Measurement Systems. Volume III—Stationary Source Specific Methods. U.S. Environmental Protection Agency. Research Triangle Park, NC. Publication No. EPA-600/4-77-027b. August 1977.
- 5. Margeson, J.H., et al. An Integrated Method for Determining  $NO_X$  Emissions at Nitric Acid Plants. Analytical Chemistry. 47 (11):1801. 1975.

## **Environmental Protection Agency**

17.0 Tables, Diagrams, Flowcharts, and Validation Data

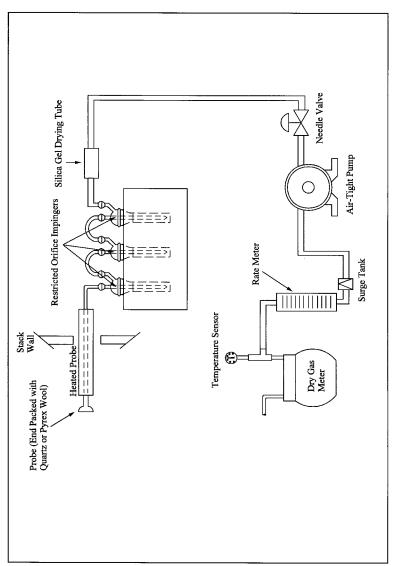


Figure 7C-1. NO<sub>x</sub> Sampling Train.

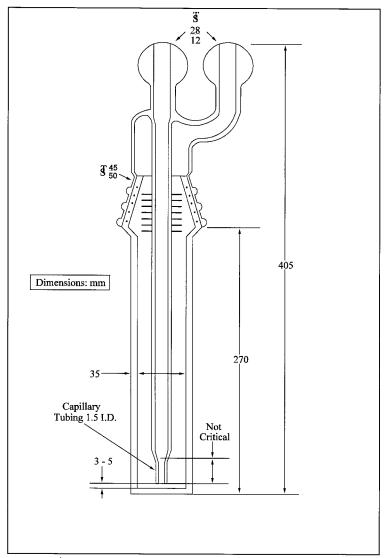


Figure 7C-2. Restricted-Orifice Impinger.

METHOD 7D—DETERMINATION OF NITROGEN
OXIDE EMISSIONS FROM STATIONARY
SOURCES (ALKALINE-PERMANGANATE/ION
CHROMATOGRAPHIC METHOD)

Note: This method is not inclusive with respect to specifications (e.g., equipment and supplies) and procedures (e.g., sampling and analytical) essential to its performance. Some material is incorporated by reference

from other methods in this part. Therefore, to obtain reliable results, persons using this method should have a thorough knowledge of at least the following additional test methods: Method 1, Method 3, Method 6, Method 7, and Method 7C.

1.0 Scope and Application

1.1 Analytes.